

35 U.S.C. 1390 (Modified) (REV 11-2000)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER <b>520.1004</b>
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371			U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR) <b>09/980809</b>
INTERNATIONAL APPLICATION NO. <b>PCT/EP00/03127</b>	INTERNATIONAL FILING DATE <b>7 April 2000</b>	PRIORITY DATE CLAIMED <b>22 April 1999</b>	

TITLE OF INVENTION  
**QUALITY CONTROL METHOD FOR DIGITAL RADIO TRANSMISSIONS IN THE MEDIUM AND SHORT WAVE RANGE.**

APPLICANT(S) FOR DO/EO/US  
**Dietmar RUDOLPH**

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (24) indicated below.
4. ☒ The US has been elected by the expiration of 19 months from the priority date (Article 31).
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))
  - a. ☒ is attached hereto (required only if not communicated by the International Bureau).
  - b. ☐ has been communicated by the International Bureau.
  - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
  - a. ☒ is attached hereto.
  - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
  - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
  - b. ☐ have been communicated by the International Bureau.
  - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
  - d. ☒ have not been made and will not be made.
8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
10. ☐ An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).
11. ☐ A copy of the International Preliminary Examination Report (PCT/IPEA/409).
12. ☒ A copy of the International Search Report (PCT/ISA/210).

**Items 13 to 20 below concern document(s) or information included:**

13. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. ☒ A **FIRST** preliminary amendment.
16. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
17. ☐ A substitute specification.
18. ☐ A change of power of attorney and/or address letter.
19. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.
20. ☐ A second copy of the published international application under 35 U.S.C. 154(d)(4).
21. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
22. ☐ Certificate of Mailing by Express Mail
23. ☐ Other items or information:

**Letter re: Priority**

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR 1.53) <div style="font-size: 1.5em; font-weight: bold;">09/980809</div>		INTERNATIONAL APPLICATION NO. <div style="font-weight: bold;">PCT/EP00/03127</div>		ATTORNEY'S DOCKET NUMBER <div style="font-weight: bold;">520.1004</div>	
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24. The following fees are submitted:

**BASIC NATIONAL FEE ( 37 CFR 1.492 (a) (1) - (5) ) :**

<input type="checkbox"/> Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO .....	<b>\$1040.00</b>
<input checked="" type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO .....	<b>\$890.00</b>
<input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO .....	<b>\$740.00</b>
<input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) .....	<b>\$710.00</b>
<input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) .....	<b>\$100.00</b>

ENTER APPROPRIATE BASIC FEE AMOUNT =

Surcharge of **\$130.00** for furnishing the oath or declaration later than \_\_\_\_\_ months from the earliest claimed priority date (37 CFR 1.492 (e)). ☐ 20    ☐ 30

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	FEE	TAXES
Total claims	9 - 20 =	0	x \$18.00	<b>\$0.00</b>	
Independent claims	3 - 3 =	0	x \$84.00	<b>\$0.00</b>	
Multiple Dependent Claims (check if applicable). <span style="float: right;"><input type="checkbox"/></span>				<b>\$0.00</b>	
TOTAL OF ABOVE CALCULATIONS =				<b>\$890.00</b>	
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.				<b>\$0.00</b>	
SUBTOTAL =				<b>\$890.00</b>	
Processing fee of <b>\$130.00</b> for furnishing the English translation later than _____ months from the earliest claimed priority date (37 CFR 1.492 (f)). <span style="float: right;"><input type="checkbox"/> 20    <input type="checkbox"/> 30</span>				<b>\$0.00</b>	
TOTAL NATIONAL FEE =				<b>\$890.00</b>	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) (check if applicable). <span style="float: right;"><input type="checkbox"/></span>				<b>\$0.00</b>	
TOTAL FEES ENCLOSED =				<b>\$890.00</b>	
				Amount to be: refunded	\$
				charged	\$

CALCULATIONS    PTO USE ONLY

a. ☒ A check in the amount of **\$890.00** to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account No. \_\_\_\_\_ in the amount of \_\_\_\_\_ to cover the above fees. A duplicate copy of this sheet is enclosed.


c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. **50-0552** A duplicate copy of this sheet is enclosed.

d. ☐ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. **Credit card information should not be included on this form.** Provide credit card information and authorization on PTO-2038.

**NOTE:** Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

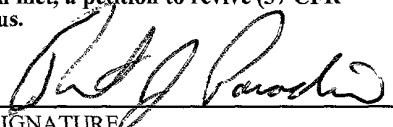
SEND ALL CORRESPONDENCE TO:

William C. Gehris, Esq.; Reg. No. 38,156  
 Davidson, Davidson & Kappel, LLC  
 485 Seventh Avenue, 14th Floor  
 New York, NY 10018  
 U.S.A.

23280

  
PATENT TRADEMARK OFFICE

  
 SIGNATURE

**Robert J. Paradiso**

NAME

**41,240**

REGISTRATION NUMBER

**October 19, 2001**

DATE

[520.1004]

**UNITED STATES PATENT AND TRADEMARK OFFICE**

Re: Application of: Dietmar RUDOLPH  
Serial No.: To Be Assigned  
International  
Application No.: PCT/EP00/03127  
Filed: Herewith  
For: QUALITY CONTROL METHOD FOR DIGITAL RADIO  
TRANSMISSIONS IN THE MEDIUM AND SHORT  
WAVE RANGE

BOX PCT  
Asst. Commissioner for Patents  
Washington, D.C. 20231

October 19, 2001

**PRELIMINARY AMENDMENT**

Sir:

Applicants request that the following Amendments be made in the above-identified matter prior to examination thereof:

**IN THE DRAWINGS**

Please add new Figure 1, submitted herewith.

**IN THE SPECIFICATION**

Before paragraph [0001], please change the heading "Specification" to  
--BACKGROUND--.

After paragraph [0001], please insert paragraphs [0001.1], [0001.2] and [0001.3] as follows:

--[0001.1] The interest in using AM broadcast ranges for digital transmissions has considerably increased. To develop a digital broadcast standard, a consortium has formed in collaboration with the International Telecommunication Union (ITU): Digital Radio Mondiale (DRM) whose

members expect a renascent interest in radio broadcasting in frequency ranges below 30 MHz. At the same time, the use of the new system presents itself to broadcasting corporations and new service providers for entering the multimedia age with small bit rates for large target areas and over large distances. The digitalization of AM ranges is probably the only chance for these frequency ranges and the technology used therein to be maintained in the long term. See RUNDFUNKTECHNISCHE MITTEILUNGEN [Technical Information on Broadcasting] Vol. 43, No. 1, March 1999, pp. 29-35.

[0001.2] For the DRM system, accordingly, the following aspects are important for digital transmission as compared to conventional analog radiation:

- same degree of reliability for the coverage of a particular target area within a particular period of time as a function of the multipath propagation and changing ionospheric conditions;
- use of several transmitters on the same frequency with the same program into approximately the same target area;
- no deterioration during cochannel or adjacent-channel interferences;
- same degree of reception quality for mobile and stationary reception; and
- more service information, in particular for improved ease of operation of the receivers.

[0001.3] Quality control is an important prerequisite for safeguarding the stipulated requirements for digital transmission in the AM ranges.--.

Please amend paragraph [0005] as follows:

[0005] The concept of hierarchical modulation for preventing a “sudden threshold” as viewed by the receiver is known. In this connection, the transmitted data stream is formed in such a manner that the receiver can detect the entire data stream for a large signal-to-noise ratio and, for a decreasing signal-to-noise ratio, reaches a first threshold ( $L_1$ ) beyond which only a part of the data stream is detectable. This is the “rugged” part of the data which the aid of which a limited audio quality is still attainable. After a second threshold ( $L_2$ ), the receiver is then mute again. A method of this kind is referred to as “Graceful Degradation”.

Please amend paragraph [0009] as follows:

[0009] The use of a “Graceful Degradation” in the short wave range is therefore in controversy. On one hand, a reduction in quality at the receiving side is preferable to a complete muting even at the cost of the following limitations:

- coverage radius with full quality decreases,
- the broadcast transmitter can no longer adjust the data rate for the audio data so flexibly as in the case of a non-hierarchical coding, and
- steep, longer-lasting fades give rise to an extremely short time range for the reduced quality, which time range hardly becomes noticeable.

Page 3, after paragraph [0010] please insert:

1) the heading --SUMMARY OF THE INVENTION--;

2) paragraph [0010.1] as follows:

--[0010.1] The present invention provides a method for quality control of a digital radio transmission in a medium or short wave range. The method includes:

- disposing at least one receiver station in or adjacent to a target area;
- evaluating quality data of a received high frequency digital signal using the at least one receiver station so as to determine corresponding parameter values;
- transmitting the corresponding parameter values to a broadcast transmitter, the transmitting being performed automatically via an Internet; and
- influencing at least one of a number of modulation stages and a coding of the transmission using the transmitted corresponding parameter values.--;

3) the heading --BRIEF DESCRIPTION OF THE DRAWING--;

4) paragraph [0010.2] as follows:

--[0010.2] Fig. 1 shows a flow chart of a method for quality control of a digital radio transmission according to the present invention.--;

5) the heading --DETAILED DESCRIPTION--; and

6) paragraph [0010.3] as follows:

--[0010.3] Referring to Fig. 1, in a method for quality control of a digital radio transmission according to the present invention, at least one receiver station is disposed in or adjacent to a target area (Step 102). Quality data of a received high frequency digital signal are evaluated using the at least one receiver station so as to determine corresponding parameter values (Step

104). The corresponding parameter values are transmitted to a broadcast transmitter, the transmitting being performed automatically via an Internet (Step 106). At least one of a number of modulation stages and a coding of the transmission is influenced using the transmitted corresponding parameter values (Step 108).--.

Page 4, first line, change "Patent Claims (2)" to --WHAT IS CLAIMED IS--.

#### **IN THE CLAIMS:**

Please cancel claims 1-2 as presented in the underlying International Application No. PCT/EP00/03127 and cancel replacement claims 1-3 as annexed to the International Preliminary Examination Report, and add new claims 4-12 as follows:

--4. (new) A method for quality control of a digital radio transmission in a medium or short wave range, the method comprising:

disposing at least one receiver station in or adjacent to a target area;

evaluating quality data of a received high frequency digital signal using the at least one receiver station so as to determine corresponding parameter values;

transmitting the corresponding parameter values to a broadcast transmitter, the transmitting being performed automatically via an Internet; and

influencing at least one of a number of modulation stages and a coding of the transmission using the transmitted corresponding parameter values.

5. (new) The method as recited in claim 4 wherein the digital radio transmission is a type of broadcast transmission for which a digital radio mondiale system recommended by an international telecommunication union establishes that a reception quality and a coverage reliability be not worse than for an analog transmission and that a same quality be guaranteed for mobile reception as for stationary reception, and that several transmitters are useable on a same frequency with a same program into approximately a same target area as with the analog transmission.

6. (new) The method as recited in claim 4 wherein the transmission is a broadcast transmission.
7. (new) The method as recited in claim 4 further comprising storing the the transmitted corresponding parameter values in a data base for performing a frequency prognosis.
8. (new) A method for quality control of a digital radio transmission in a medium or short wave range, the method comprising:
  - disposing at least one receiver station in or adjacent to a target area;
  - evaluating quality data of a received high frequency digital signal using the at least one receiver station so as to determine corresponding parameter values;
  - transmitting the corresponding parameter values to a broadcast transmitter, the transmitting being performed automatically via the Internet; and
  - determining alternative transmit frequencies using the transmitted corresponding parameter values.
9. (new) The method as recited in claim 8 wherein the digital radio transmission is a type of broadcast transmission for which a digital radio mondiale system recommended by an international telecommunication union establishes that a reception quality and a coverage reliability be not worse than for an analog transmission and that a same quality be guaranteed for mobile reception as for stationary reception, and that several transmitters are useable on a same frequency with a same program into approximately a same target area as with the analog transmission.
10. (new) The method as recited in claim 8 wherein the transmission is a broadcast transmission.
11. (new) The method as recited in claim 8 further comprising storing the the transmitted corresponding parameter values in a data base for performing a frequency prognosis.

12. (new) A method for quality control of a digital radio transmission in a medium or short wave range, the method comprising:

providing a backward channel to an AM transmitter for digital signals received in a target area; and

using the backward channel to provide a high reception quality and coverage reliability.--.

**IN THE ABSTRACT:**

Please replace the abstract of record with the following new abstract:

--A method for quality control of digital radiotransmissions in the medium or short wave range includes disposing at least one receiver station in or adjacent to a target area. Quality data of a received high frequency digital signal is evaluated using the at least one receiver station so as to determine corresponding parameter values. Corresponding parameter values are transmitted to a broadcast transmitter automatically via the Internet. Using the transmitted parameter values, the number of modulation stages and/or a coding of the transmission may be influenced and/or alternative transmit frequencies may be determined.--.



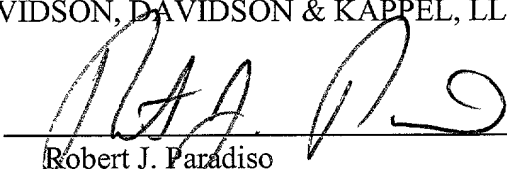
**REMARKS**

Applicants believe that no fees are due as a result of this amendment. In the event of a fee discrepancy, please charge our Deposit Account No. 50-0552.

Respectfully submitted,

DAVIDSON, DAVIDSON & KAPPEL, LLC

By: \_\_\_\_\_

  
Robert J. Paradiso  
Reg. No. 41,240

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485 Seventh Avenue - 14<sup>th</sup> Floor  
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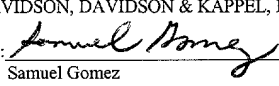
"Express Mail" mailing label no.: EL 914493194 US

Date of deposit: October 19, 2001

I hereby certify that this correspondence and/or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above in an envelope addressed to "Commissioner of Patents and Trademarks, Washington, DC 20231"

DAVIDSON, DAVIDSON & KAPPEL, LLC

BY: \_\_\_\_\_

  
Samuel Gomez

**VERSION OF SPECIFICATION AND CLAIMS AMENDMENTS**  
**WITH MARKINGS TO SHOW CHANGES MADE**

IN THE SPECIFICATION:

Page 1, before paragraph [0001]: --BACKGROUND-- [Specification].

Page 1, paragraph [0005]:

[0005] [According to the related art, there is the] The concept of hierarchical modulation for preventing a “sudden threshold” as viewed by the receiver is known. In this connection, the transmitted data stream is [composed] formed in such a manner that the receiver can detect the entire data stream for a large signal-to-noise ratio and, for a decreasing signal-to-noise ratio, reaches a first threshold ( $L_1$ ) beyond which only a part of the data stream is detectable. This is the “rugged” part of the data which the aid of which a limited audio quality is still attainable. After a second threshold ( $L_2$ ), the receiver is then mute again. A method of this kind is referred to as “Graceful Degradation”.

Page 2, paragraph [0009]:

[0009] The use of a “Graceful Degradation” in the short wave range is therefore in controversy. On one hand, a reduction in quality at the receiving side is preferable to a complete muting even at the cost of the following limitations:

- coverage radius with full quality decreases,
- the broadcast transmitter can no longer adjust the data rate for the audio data so flexibly as in the case of a non-hierarchical coding, and

- steep, longer-lasting fades give rise to an extremely short time range for the reduced quality, which time range hardly becomes noticeable.

Page 4 first line : --WHAT IS CLAIMED IS-- [Patent Claims (2)].

1/p<sub>1</sub>

520.1004

QUALITY CONTROL METHOD FOR DIGITAL RADIO TRANSMISSIONS IN THE  
MEDIUM AND SHORT WAVE RANGE

## Specification

- [0001] The present invention relates to the field of quality control for digital radio program transmissions in the medium and short wave range.
- [0002] Digital signal transmissions, as can already be gathered from the term "digital", have the characteristic that either they deliver a virtually error-free audio signal or else that the audio signal is not usable and the receiver switches to muting. The quality of the received high frequency signal determines the threshold above which the audio quality is perfect and below which no audio reception is possible.
- [0003] In physical terms, this behavior is due to the fact that the error curves for the bit errors (or also for the symbol errors) decrease very steeply as the ratio of received signal energy/noise level increases. This means virtually that, above a certain threshold ( $L$ ) of signal energy/noise level, the bit error rate goes toward negligibly small values. The then still remaining residual errors can be corrected by the audio decoder, resulting in a perfect audio quality.
- [0004] In the medium and, even more strongly in the short wave range, propagation-related fading phenomena occur which are irregular in time and which, inter alia, result in that the received signal energy heavily decreases and/or in that the noise level heavily increases. Because of this, the reception threshold is undershot so that muting occurs.
- [0005] According to the related art, there is the concept of hierarchical modulation for preventing a "sudden threshold" as viewed by the receiver. In this connection, the transmitted data stream is composed in such a manner that the receiver can detect the entire data stream for a large signal-to-noise ratio and, for a decreasing signal-to-noise ratio, reaches a first threshold ( $L_1$ ) beyond which only a part of the data stream is detectable. This is the "rugged" part of the data which the aid of which a limited

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audio quality is still attainable. After a second threshold ( $L_2$ ), the receiver is then mute again. A method of this kind is referred to as “Graceful Degradation”.

[0006] From a standpoint of coverage, it should be observed that the threshold values are to each other as follows:

$$L_1 > L > L_2$$

[0007] This means virtually that, in the case of hierarchical modulation, the coverage radius ( $R_1$ ) with maximum audio quality is smaller than that ( $R$ ) in the case of non-hierarchical modulation. On the other hand, in the case of hierarchical modulation, the transmitter can at least still be received with limited quality within a greater coverage radius ( $R_2$ ). For the coverage radii, the following applies:

$$R_1 < R < R_2$$

[0008] However, definitely definable coverage radii exist only in the case of the propagation at very high frequencies, for example, beyond the VHF range. At these high frequencies, no total fading occurs any more as it arises so often with the medium and short wave.

[0009] The use of a “Graceful Degradation” in the short wave range is therefore in controversy. On one hand, a reduction in quality at the receiving side is preferable to a complete muting even at the cost of limitations:

- coverage radius with full quality decreases,
- the broadcast transmitter can no longer adjust the data rate for the audio data so flexibly as in the case of a non-hierarchical coding,
- steep, longer-lasting fades give rise to an extremely short time range for the reduced quality, which time range hardly becomes noticeable.

[0010] On the other hand, a hierarchical coding/modulation in the receiver is more expensive; above all, it has to be implemented in every receiver. This contradicts the concept of

the inexpensive receiver. A scalability of the receivers in terms of price from cheap to high quality is probably more important.

[0011] Provided as alternatives to “Graceful Degradation” according to the present invention are:

- Preselecting a stronger coding/modulation for critical target areas.
- Using alternative transmitting frequencies for the transmission of the same program in conjunction with an automatic switchover.

[0012] To assess the real receiving situation, a monitor station is required in the target area, from which monitor station the parameters of the received high frequency signals are automatically transmitted to the broadcast transmitter. In this manner, “intelligence” is transferred from the receiver into the transmitter, which complies with the concept of broadcasting.

[0013] The interrogation of quality data from the monitor station can be effected via the Internet. An automatic feedback is also possible via the Internet. This feature can be implemented by each broadcasting corporation separately and independently.

[0014] In the case of target areas which do not permit any monitor stations, it is possible to determine an estimate for the propagation via monitor stations in adjacent areas.

## Patent Claims (2)

1. A quality control method for digital radio transmissions in the medium and short wave range, wherein

at least one receiver station is located in the target area or adjacent thereto, which receiver station evaluates the quality data of the received high frequency digital signal and determines the appertaining parameter values;  
the determined parameter values are transmitted to the broadcast transmitter;  
the transmission of the determined parameter values to the broadcast transmitter is carried out automatically via the Internet; and  
the parameter values transmitted to the broadcast transmitter are used for influencing the number of modulation stages and/or the coding of the broadcast transmission or for determining alternative transmit frequencies.

2. The method as recited in Claim 1,  
wherein the parameter values which are determined by the receiver station in the target area and transmitted to the broadcast transmitter are stored in a data base for frequency prognoses.

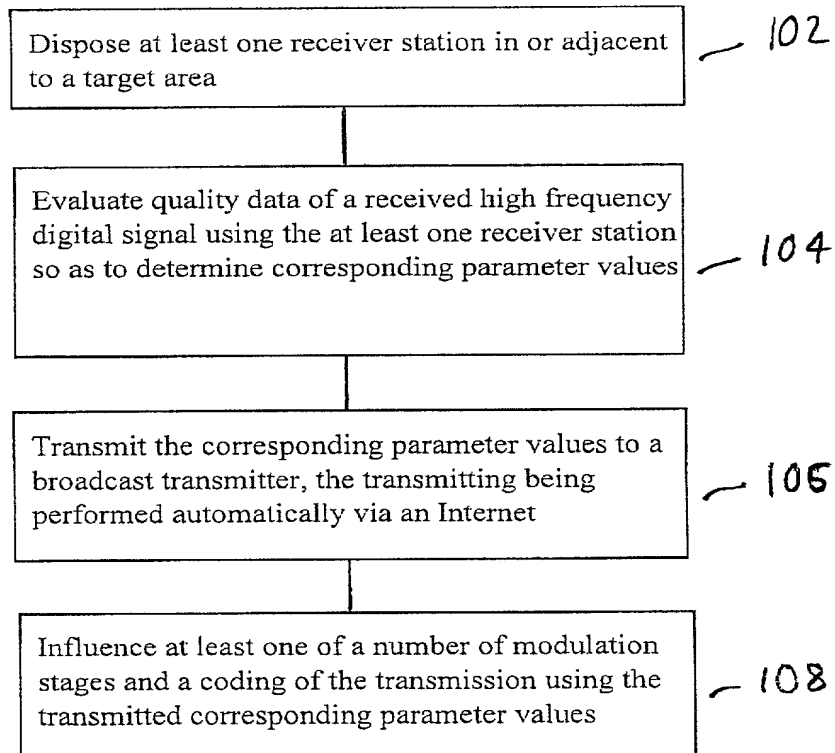


FIG. 1



## DECLARATION AND POWER OF ATTORNEY

Docket No.: 520.1004

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter that is claimed and for which a patent is sought on the invention entitled: CONTROL METHOD FOR DIGITAL RADIO TRANSMISSIONS IN THE MEDIUM AND SHORT WAVE RANGE, the specification of which (check one)

☐ is attached hereto

☒ was filed on 7 April, 2000 as International Application Serial No. PCT/EP00/03127 and was amended on (if applicable).

☐ I hereby authorize and request our attorneys, Davidson, Davidson & Kappel, LLC of 485 Seventh Avenue, New York, New York 10018 to insert here in parentheses (application number \_\_\_\_\_, filed \_\_\_\_\_) the filing date and application number of said application when known.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose all information that is known to me to be material to the patentability of this application as defined in Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign and/or provisional application(s) for patent or inventor's certificate listed below and have also identified below any foreign and/or provisional application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

## PRIOR APPLICATION(S)

199 18 829.7 Number	Germany Country	22 April 1999 Day/Month/Year Filed	Priority claimed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Number	Country	Day/Month/Year Filed	Priority claimed <input type="checkbox"/> Yes <input type="checkbox"/> No

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application Serial Number	Day/Month/Year Filed	Status
Application Serial Number	Day/Month/Year Filed	Status

And I hereby appoint Clifford M. Davidson, Reg. No. 32,728, Leslye B. Davidson, Reg. No. 38,854, Cary S. Kappel, Reg. No. 36,561, William C. Gehris, Reg. No. 38,156, Morey B. Wildes, Reg. No. 36,968, Robert J. Paradiso, Reg. No. 41,240, Erik R. Swanson, Reg. No. 40,833, Thomas P. Canty, Reg. No. 44,586, and all other registered attorneys and agents at Davidson, Davidson & Kappel, LLC, U.S. Patent and Trademark Office Customer Number 23280, my attorneys, with full power of substitution and revocation, to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected therewith; correspondence address: DAVIDSON, DAVIDSON & KAPPEL, LLC, 485 Seventh Avenue, 14th Floor, New York, New York 10018; Telephone: (212) 736-1940; Fax: (212) 736-2427.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor	Dietmar RUDOLPH
Inventor's signature	<i>[Signature]</i>
Date	21.10.01
Residence	Berlin, Germany <i>DCX</i>
Post Office Address	Glockenstr. 2c, D-14163 Berlin, Germany
Citizenship	German

Full name of additional inventor	
Inventor's signature	
Date	
Residence	
Post Office Address	
Citizenship	

☐ Additional inventors named on attached sheet(s).